APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,144	10/31/2003	Douglas D. Boom	5038-331	2967

32231	7590	11/24/2006		

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EXAMINER
KIM, KENNETH S

ART UNIT	PAPER NUMBER
2111	

DATE MAILED: 11/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>04 October 2006 and 09 November 2006</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-15,17-23 and 25-28* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 4-15, 17-23, and 25-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

1.   Claims 1, 4-15, 17-23, and 25-28 remain for examination.

2.   The abstract of the disclosure is objected to because the current abstract does
not reflect the inventive feature of the claimed invention clearly. Correction is required.
See MPEP § 608.01(b).

In particular, storing of mainline program instructions and interrupt service

instructions in cache, fetching those instruction into an instruction stream, such that the

allocation of core processor bandwidth between the mainline and interrupt service

instructions while executing the instruction stream is based on the interrupt priority

would make it clearer. Recycling of executed micro-ops and detecting imminent context

switch for interrupt service instruction preparation should also be mentioned.

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

4.   Claims 1, 4-15, 17-23, and 25-28 are rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly claim the

subject matter which applicant regards as the invention.

(a)   Claim 1, "forming an instruction stream sequence within an instruction cache"

appears to be an inaccurate description, since cache simply stores various instructions

randomly. An instruction stream sequence is formed while fetching

(b)   Claim 1, it is not clear whether the mix of mainline instructions and the interrupt

service instructions in the instruction stream is such that when the instruction stream is

executed, the core processor bandwidth is allocated according to the mix, and the mix is

based on the priority of the interrupt. Capacity is what's being allocated and can't be

the criteria of allocation.

Instead of the forming and fetching paragraph, how about something like or

similar to "fetching instructions from the instruction cache into an instruction stream

sequence including mainline program instructions and the interrupt service instructions,

the relative proportion based on the interrupt priority, such that execution of the

instruction stream sequence results in core processor bandwidth allocation".

(c)   Claim 10, the same as (a) and (b), and in the executing paragraph "within the

instruction cache" may be inappropriate.

(d)   Claim 11, the same as (a) and (b), and "an interrupt handler" detects an interrupt

request and probably not interrupt service instructions.   In the last paragraph "inserting

micro-ops to instruction sequence within the instruction cache" appears to be

inaccurate.

(e)   Claim 13, the same as (d).

(f)   Claim 14, "insert ... into p-code" appears to be an inaccurate description.

Insertion is rather to an instruction stream containing p-codes.

(g)   Claim 22, the same as (a) and (b), and in the processing and the last paragraphs

"instruction stream sequence within the instruction cache" appears to be inaccurate.

(h)   Claim 25, the same as (a) and (b).

(i)   Claim 28, "the inserted micro-ops" lacks antecedent basis, and may be

rephrased in light of (a) and (b).

5.   Applicant's arguments with respect to claims 1, 4-15, 17-23, and 25-28 have

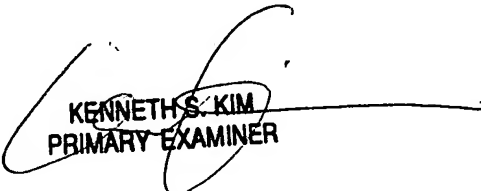been considered but are moot in view of the new ground(s) of rejection.

6.   Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Kenneth S KIM whose telephone number is (571) 272-
3627. The examiner can normally be reached on M-F (8:30-17:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Mark Rinehart can be reached on (571) 272-3632. The fax phone numbers
for the organization where this application or proceeding is assigned are (571) 273-8300
for all communications.

Any inquiry of a general nature or relating to the status of this application or
proceeding should be directed to the receptionist whose telephone number is (571) 272-
2100.

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November 17, 2006

KENNETH S. KIM
PRIMARY EXAMINER